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(74) Agent: GROS, Glorent; Novartis AG, Corporate Intellectual Property, Patent & Trademark Department, CH-4002 Basel (CH).

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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WO 03/090740 A1

(54) Title: USE OF PLEUROMUTILINS FOR THE TREATMENT OF DISORDERS CAUSED BY HELICOBACTER PYLORI

(57) Abstract: A method of preventing or treating diseases mediated by Helicobacter pylori, comprising administering to a subject in need of such treatment an effective amount of a pleuromutilin.

## INTERNATIONAL SEARCH REPORT

Intern'l Application No  
PCT/EP 03/04173A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 A61K31/22 A61K31/265 A61P31/04

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99 00136 A (ROWE JAMES BABER) 7 January 1999 (1999-01-07) claims 1,2,4,5,21 ----	1-5, 7
Y	WO 01 09095 A (ASCHER GERD ;BERNER HEINZ (AT); BIOCHEMIE GMBH (AT); HILDEBRANDT J) 8 February 2001 (2001-02-08) cited in the application claims 1-17 page 11, line 21 - line 28 ----	6
Y	EP 0 153 277 A (SANDOZ AG ;SANDOZ AG (CH); SANDOZ AG (DE)) 28 August 1985 (1985-08-28) cited in the application claims 1-9 ----	6

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

## \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search  30 July 2003	Date of mailing of the international search report  06/08/2003
Name and mailing address of the ISA  European Patent Office, P.B. 5618 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer  Siatou, E

## INTERNATIONAL SEARCH REPORT

Internal Application No  
PCT/EP 03/04173

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 02 04414 A (ASCHER GERD ;BERNER HEINZ (AT); BIOCHEMIE GMBH (AT)) 17 January 2002 (2002-01-17) cited in the application claims 1-9 page 7, line 16 - line 23 ---	1-7
A	WO 02 22580 A (ASCHER GERD ;BERNER HEINZ (AT); BIOCHEMIE GMBH (AT); HILDEBRANDT J) 21 March 2002 (2002-03-21) cited in the application the whole document ---	1-7
A	SHINOHARA K ET AL: "GASTRIC DISEASES RELATED TO HELICOBACTER PYLORI AND EPSTEIN-BARR VIRUS INFECTION" MICROBIOLOGY AND IMMUNOLOGY, TOKYO, JP, vol. 42, no. 6, 1998, pages 415-421, XP001098551 ISSN: 0385-5600 the whole document ----	1-7
A	DORNHELM P ET AL: "THE EFFECTS OF TIAMULIN, A SEMISYNTHETIC PLEUROMUTILIN DERIVATIVE, ON BACTERIAL POLYPEPTIDE CHAIN INITIATION" EUROPEAN JOURNAL OF BIOCHEMISTRY, BERLIN, DE, vol. 91, no. 2, November 1978 (1978-11), pages 465-473, XP000950040 ISSN: 0014-2956 the whole document -----	1-7

# INTERNATIONAL SEARCH REPORT

Int'l application No.  
PCT/EP 03/04173

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:  

Although claims 3-4 and 5-7, as far as they refer back to the method, are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the composition.
2.  Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3.  Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

The additional search fees were accompanied by the applicant's protest.  
 No protest accompanied the payment of additional search fees.

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

Internal PCT/EP	Application No 03/04173
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